



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,104	09/09/2003	Por-Hong Lin	22171-00008-US	5152
30678 7590 08/03/2007 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20036			EXAMINER HSU, ALPUS	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 08/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/657,104

Applicant(s)

LIN ET AL.

Examiner

Alpus H. Hsu

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 2/2/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date, ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

2. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of independent claims 1, 5 and 7, the terms of "ARP" and "NAT" should be defined as to what each stands for at its first occurrence.

In claim 1, lines 5 and 8, claim 3, lines 2-3, 3-4, claim 7, line 7, claim 8, lines 2-3, 3-4, it is confusing for reciting "an ARP response" repeatedly without further distinguish among them. Are they all referring to the same ARP response?

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2616

5. Claims 1, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over LORRAIN et al. in U.S. Patent No. 6,631,137 B1, hereinafter referred to as LORRAIN.

Referring to claims 1, 4 and 5, LORRAIN discloses a virtual subnet controlling method, which utilizes a virtual subnet controller (R) to connect a first network (N1) and a second network (N2) including at least one subnet, the method comprising the steps of: broadcasting an ARP request by a first station (S); responding an ARP response by a second station if the second station is the destination station of the ARP request and is located at the same subnet as the first station; responding an ARP response by the virtual subnet controller; recording/updating ARP response/destination address at ARP table; transmitting data packets from the first station to the virtual subnet controller; and transmitting data packets from the virtual subnet controller to the second station (see col. 4, line 55 to col. 5, line 26, , col. 6, line 59 to col. 7, line 4, col. 8, lines 31-51, col. 9, lines 26-60).

LORRAIN differs from the claims, in that, it does not disclose the feature of two networks, one being a public network, and the other being a private network. However, LORRAIN does mention the extension to different networks would require only the insertion of conventional translational bridging facilities in between (see col. 9, lines 10-21). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate two specific networks, one being a public network, and the other being a private network, utilizing the insertion of conventional translational bridging facilities in between, to provide system with adaptability when operating under different network environments.

6. Claims 2, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over LORRAIN in view of BROTHERS et al. in U.S. Patent No. 6,822,955 B1, hereinafter referred to as BROTHERS.

Referring to claims 2, 6 and 7, LORRAIN also differs from the claims, in that, it does not disclose the conversion of IP address using NAT protocol, which is well known in the art and commonly used in communications field for network protocol conversion.

BROTHERS, for example, from the similar field of endeavor, teaches the utilization of NAT protocol for converting IP addresses (see col. 4, lines 2-15, 50-64), which can be easily adopted by one of ordinary skill in the art into the method in LORRAIN, to provide proper network protocol conversion for Internet related applications to further improve the system capability and efficiency.

Referring to claim 7, LORRAIN in view of BROTHERS also fails to disclose the elements of a subnet mapping table and a control unit within the virtual subnet controller, which are merely well known hardware implementation for the method steps, which can be easily adopted by one of ordinary skill in the art to implement to fulfill the system design requirements.

7. Claims 3 and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nishimura et al., Datta et al., Gioquindo et al. '615, '616 & '154, Whitehill et al., Barker, Jr. et al., Bahl et al., and Yoshimura are all cited to show the common feature of data routing

Art Unit: 2616

between different LANs utilizing ARP request, ARP response, and ARP table similar to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alpus H. Hsu whose telephone number is (571)272-3146. The examiner can normally be reached on M-F (5:30-3:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571)272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AHH



Alpus H. Hsu
Primary Examiner
Art Unit 2616